

INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB2004/002543

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01G23/047 C01F7/14 C01F7/38 C22B34/12 C22B7/00
C01G49/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01G C01F C22B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 1 053 383 A (TITAN CO INC) 2 February 1954 (1954-02-02) claims 3,4 page 2, column 1, paragraph 4 - page 3, column 1, paragraph 3	1,2,5,8, 12-15,20
Y	examples	3,4,6,7, 9-11, 16-19, 21-25, 27,29, 33,34

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

26 August 2004

Date of mailing of the international search report

14/09/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Rhodes, K

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/002543

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/10068 A (JHA ANIMESH ; UNIV LEEDS (GB); ANTONY MALPAN PAILO (IN); THATHAVADKAR) 7 February 2002 (2002-02-07) claims 1,7-22 page 4, line 20 - page 9, line 19	26,28, 30-32
Y	examples	3,4,6,7, 9-11, 16-19, 21-25, 27,29, 33,34
A	----- GB 848 230 A (BLANCS DE ZINC DE LA MEDITERRA) 14 September 1960 (1960-09-14) claim 1 page 1, line 17 - page 2, line 35 examples	1-34
A	----- US 3 989 513 A (HORVATH GYULA ET AL) 2 November 1976 (1976-11-02) cited in the application claims 1,2,5-7 column 1, line 49 - column 2, line 25 examples	1-25,34
A	----- US 1 911 396 A (EARL DUNN HOLBERT ET AL) 30 May 1933 (1933-05-30) claims column 1, line 42 - column 3, line 27 -----	26-33

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2004/002543

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-34

1.1 Claims 1-25 and 34 directed to the extraction of a metal oxide by heat treatment and reduction of a titaniferrous or aluminaferrous mixture, followed by treatment with alkali and extraction of desired metal oxide from the slag.

1.2 Claims 26-33 directed to the recovery of titanium dioxide from titanium oxide-containing composition by roasting in presence of alkali metal carbonate and alumina-containing material, followed by recovery of TiO_2 from the roasted mass.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2004/002543

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
FR 1053383	A	02-02-1954	NONE	
WO 0210068	A	07-02-2002	AU 7646601 A WO 0210068 A1	13-02-2002 07-02-2002
GB 848230	A	14-09-1960	NONE	
US 3989513	A	02-11-1976	HU 164466 B AU 474476 B2 AU 5640573 A DD 105004 A5 DE 2328674 A1 FR 2187694 A1 IT 1017518 B JP 941452 C JP 50016608 A JP 53024033 B RO 64744 A1	28-02-1974 22-07-1976 05-12-1974 05-04-1974 10-01-1974 18-01-1974 10-08-1977 20-02-1979 21-02-1975 18-07-1978 15-04-1980
US 1911396	A	30-05-1933	NONE	